R E M A R K S

Reconsideration of this application is respectfully requested.

Claims 1-26 were rejected under 35 USC 103 as being obvious over USP 6,639,657 ("Baer et al") in view of USP 4,842,782 ("Portney et al").

Claims 27-36 were not listed in the rejection. It appears that the Examiner intended to include claims 27-36 in the rejection of claims 1-26.

In any event, as explained below, Baer et al and Portnoy et al do not achieve or render obvious the features recited in independent claims 1, 12 and 23. In addition, it is respectfully submitted that the Examiner has not addressed, and the references do not suggest, the features recited in various dependent claims. Accordingly, the rejection in view of Baer et al and Portnoy et al is respectfully traversed.

The Cited References

Baer et al discloses a laser capture microdissection ("LCM") apparatus in which a microcentrifuge tube cap 120 is provided with a laser capture microdissection transfer film and is placed on a glass slide 130 on which a sample to be microdissected is located. In the structure of Fig. 3of Baer et al (the structure referred to by the Examiner), for example, film activation laser

320 is provided. A laser beam path 310 begins at the film activation laser 320, is reflected by a mirror 330, is reflected by a dichroic mirror 340, is focused by lens 350 and passes to the microcentrifuge tube cap 120. (See, for example, column 6, lines 29-42.) The portion of the laser capture microdissection film (of the tube cap 120) irradiated with the laser melts and adheres to the sample, adhering a portion of the sample to the film to allow the adhered portion of the sample to be acquired (see, for example, column 2, lines 40-49).

According to Baer et al, moreover, the diameter of the laser beam may be changed to adjust the size of the sample to be obtained. (column 7, lines 12-25). Specifically, Baer et al discloses that the lens 350 may be associated with a structure such as a variable aperture for changing the beam diameter (column 6, lines 34-36). Baer et al suggests employing a stepped glass prism 380 to change the optical path length and alter the spot size of the laser beam (column 7, lines 22-24).

However, as recognized by the Examiner, Baer et al does not disclose an active optical element on which a variable pattern is formed, or pattern forming means. For this reason, the Examiner has cited Portnoy et al to supply the missing teachings of Baer et al.

Unlike Baer et al and the claimed present invention, which relate to microdissection of a sample, Portnoy et al relates to

manufacturing ophthalmic lenses. More specifically, Portnoy et al relates to creating an intraocular lens, including both an optic 12 (the actual lens) and a haptic 14 (which anchors the lens in the patient's eye) from a block of polymethylmetacrylate (PMMA).

According to Portnoy et al, a mask 22 (Fig. 3) is used to cut a workpiece 10 (Fig. 1) from a block of PMMA by irradiating a laser beam from a laser 16 through a beam expander 20 onto the mask 22 which permits only a narrow strip of light in the shape of the outline 24 of the workpiece 10 to pass. A beam converger/focusing optic 26 projects an image of the outline 24 from the mask onto the PMMA block 28 until the workpiece 10 (Fig. 1) is cut out.

Next, according to Portnoy et al, the workpiece 10 (Fig. 1) is shaped. More specifically, a laser beam 30 is irradiated onto the workpiece 10 through a mask 32 (Fig. 5) that has different degrees of transparency at different positions. That is, a large amount of the laser beam is transmitted at area 34 of the mask, and a small amount of the laser beam is transmitted at area 36, to create depressions and protrusions in the surface 38 of the workpiece 10 (Fig. 4).

Next, according to Portnoy et al, the edges of the workpiece 10 are rounded. More specifically, a laser beam 40 is expanded by a beam expander or "preferably" by curved mirrors 42

and 44, and is transmitted through a mask 48 (Fig. 7) and then through a focusing lens 50. According to Portnoy et al, this structure produces a beam shaped generally as a hollow cone. The workpiece 10 is positioned first below a focal point 52 (Fig. 6) of the laser beam at 54 and then above the focal point 52 at 62 (Fig. 6) so as to bevel the edges of the workpiece (Figs. 8 and 9).

The Independent Claims Recite Structure Not Disclosed or Suggested by the Cited References

Each of amended independent claims 1, 12 and 23 recites an active optical element on which a variable pattern is formed to correspond to a necessary area (claims 1 and 23) or pattern forming means for transmitting or reflecting the laser light selectively in accordance with a variable pattern which is set to correspond to a necessary area (claim 12), and an objective lens which is positioned between the active optical element or pattern forming means and the sample. According to the present invention as recited in independent claims 1, 12 and 23, laser light is irradiated through (transmitted through or reflected by) the active optical element or pattern forming means, and the laser light from the active optical element or pattern forming means is guided to the sample by the objective lens.

It is not clear from the Examiner's description of Baer et al whether the Examiner considers lens 350 or objective 360 of Baer et al to correspond to the objective lens recited in claims 1, 12 and 23. It is respectfully pointed out that while Baer et al does disclose that a lens (such as lens 350) may be provided on the path of laser light to the sample, the objective lens 360 of Baer et al is not positioned on a path of light to a sample, and therefore does not guide laser light to the sample and cannot be "positioned between the active optical element and the sample" as recited in claim 1 and 23 or "positioned between the pattern forming means and the sample" as recited in claim 12.

Moreover, the Examiner asserts that the mask disclosed by Portnoy et al corresponds to an "active optical element" as recited in claims 1 and 23 and to a "pattern forming means" as recited in claim 12. (It is noted that the Examiner has only referred to "pattern forming means." It appears that the Examiner intended to refer both to an "active optical element" and "pattern forming means.")

It is respectfully pointed out, however, that according to independent claim 1, an **active** optical element is provided, and a **variable** pattern set to correspond to a necessary area is formed on the **active** optical element. In addition, independent claim 12 recites pattern forming means for transmitting or reflecting laser light selective in accordance with a **variable** pattern set

to correspond to a necessary area. Still further, independent claim 23 recites forming a **variable** pattern on an **active** optical element such that the pattern is set to correspond to a necessary area of a sample.

Thus, each of independent claims 1, 12 and 23 recite that the pattern is **variable**. In addition, claims 1 and 23 recite an **active** optical element.

It is respectfully submitted that Portnoy et al clearly does not disclose, teach or suggest the setting of a variable pattern, or an active optical element. Indeed, the Office Action does not even mention an "active" optical element.

More specifically, Portnoy et al contains no disclosure to suggest that mask 22 (Fig. 7) is an "active" optical element or to that the pattern on mask 22 (namely, the outline 24) is "variable." Thus, it is respectfully submitted that Portnoy et al clearly does not suggest that mask 22 can be set with a "variable" pattern. Instead, Portnoy et al merely discloses that mask 22 has one fixed pattern corresponding to the desired outline 24.

In the same manner, Portnoy et al does not suggest that mask 48 (Fig. 7) has anything other than a single fixed pattern as shown in Fig. 7. That is, Portnoy et al contains no disclosure to suggest that the mask 48 can be set to have a pattern different from the one illustrated in Fig. 7. Clearly,

therefore, the mask 48 shown in Fig. 7 of Portnoy et al is not an "active" optical element, nor can a "variable" pattern be formed on the mask 48.

Portnoy et al also contains no disclosure to suggest that mask 32 (Fig. 5) is an "active" optical element or that a "variable" pattern can be formed on the mask 32. Indeed, Portnoy et al provides examples of structures for forming the mask 32, including "a coating," "a natural density filter" or a mirror with a "reflective coating." According to Portnoy et al, the transmission characteristics of the mask 32 vary across the mask. However, Portnoy et al clearly does not suggest that the pattern formed on the mask 32 can be varied. That is, while the mask 32 has a pattern having different degrees of transparency at different portions, this pattern is fixed, and the mask 32 is not "active" and is not capable of having a "variable" pattern formed thereon that is "set to correspond to a necessary area."

With respect to the mask 32 of Portnoy et al, moreover, it is respectfully pointed out that Portnoy et al does not disclose that the mask 32 excludes any area of the workpiece 10 from being irradiated with light. By contrast, according to independent claims 1, 12 and 23, the laser light is irradiated through (transmitted through or reflected by) the active optical element or pattern forming means such that "a part of the sample **excluding the necessary area** is irradiated with the laser

light." It is respectfully submitted that Portnoy et al does not disclose or suggest that the mask 32 has such a structure.

Thus, it is respectfully submitted that none of masks 22, 32 and 48 of Portnoy et al is an **active** optical element as recited in claims 1 and 23. In addition, it is respectfully submitted that Portnoy et al does not disclose or suggest that any of masks 22, 32 and 48 has a **variable** pattern formed thereon, or that such a **variable** pattern is set to correspond to a necessary area, as recited in claim 1 and 23. Accordingly, it is respectfully submitted that Portnoy et al clearly does not disclose, teach or suggest an active optical element as recited in independent claims 1 and 23. And it is respectfully submitted that Portnoy et al clearly does not disclose or suggest pattern forming means for transmitting or reflecting laser light selectively in accordance with a **variable** pattern, wherein the **variable** pattern is set to correspond to a necessary area as recited in claim 12.

In view of the foregoing, it is respectfully submitted that even if Portnoy et al were combinable with Baer et al in the manner suggested by the Examiner, the structural features recited in independent claims 1, 12 and 23 would still not be achieved or rendered obvious.

The Examiner Has Not Addressed the Dependent Claims

The Examiner has not specifically addressed the dependent claims. And it is respectfully submitted that the dependent claims recite many features which are also not disclosed, taught or suggested by the cited references. See, for example, claims 4, 5, 7 (and the claims depending therefrom), and claims 15, 16, 18 (and the claims dependent therefrom), and claims 25, 30, 31, 34 and 35.

Accordingly, if another Office Action is issued in the present application, it is respectfully requested that such Office Action be complete with respect to all of the claims.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

/Douglas Holtz/

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